

REMARKS

Initially, applicants would like to express their appreciation to the Examiner for discussing the application with applicant's representative on July 11, 2007. During the interview, applicants' representative explained operation of the present invention. Applicants' representative also explained first order and second order filters, and how such a filter is not simply an LC filter. Rather, as is well known in the art, first order filters are described by first order differential equations, and second order filters are described by second order differential equations. Applicant's representative further explained why the proposed combination is improper. That is, ROGERS et al. explains at col. 1, lines 61 – 65 why image reject mixers are unsatisfactory. In light of their perceived drawbacks of image reject mixers, ROGERS et al. endeavor to sufficiently filter a signal within an amplifier so that an image is reflected. Therefore, ROGERS et al. contemplate use of their invention with a mixer, not an image reject mixer. Moreover, (although not discussed during the interview) BERTONIS et al. recite an image reject mixer, and thus would not require the LC resonator of ROGERS et al. to reject the image. Consequently, one of ordinary skill reading BERTONIS et al. would not look to modify their system to incorporate an image reject filter, which would be superfluous to BERTONIS et al.'s image reject mixer.

During the interview, potential amendments to the claims were discussed. In particular, the Examiner indicated that limiting the claims to recite coarsely filtering at 150 MHz and less coarsely filtering at 142 MHz may distinguish over the applied references. It is believed that the Official Action does not refer to these claim features, nor do the references teach or suggest both levels of filtering. In accordance with the discussion, the independent claims have been amended to recite such limitations. Support for the amendments is found in the specification, for example, at paragraph 31. Support for the amendments regarding the image reject mixer filtering at 142 MHz is found, for example, at paragraph 33.

In response to the rejections of claims 1, 29, 34, and 46 applicants submit that the LC resonator of ROGERS et al. does not anticipate nor render obvious the claimed “only first order filters and second order filters” at least because the characteristics of the LC resonator are undefined. That is, the proposed combination does not include only first and second order filters, but rather includes two filters, both with undisclosed characteristics. For at least

this reason, it is respectfully requested that the Examiner withdraw the rejections of independent claims 1, 29, 34, and 46.

Independent claims 17 and 29 are believed to be allowable, at least because they recite that a signal energy of a particular/first signal is substantially less than an additional/second signal energy. Independent claim 39 is believed to be allowable, at least because it recites an “image frequency signal” that is “substantially greater in amplitude than said signal of interest.” BERTONIS is used to select a copy of a signal having better quality. Obviously both copies have the same energy/amplitude and therefore cannot anticipate nor render obvious the claimed features. ROGERS et al. do not supply the deficiency of BERTONIS et al. Moreover, it is noted that the Examiner does not address these energy/amplitude limitations in the Official Action. For at least these reasons, it is respectfully requested that the Examiner withdraw the rejections of independent claims 17 and 39.

The dependent claims are believed to be allowable for the reasons stated above, in addition to reasons related to their own recitations. For example, numerous claims recites specific performance characteristics. Claim 4 limits the filter network to providing approximately 20dB of rejection of the image frequency signal energy. Although the Examiner refers to paragraph 6 of the background section, applicants note that paragraph 6 refers to signal to noise and distortion ratios of a down conversion result, and not an amount of rejection of the image frequency that is accomplished by the filtering network and/or image reject mixer. Claims 20 and 37 further define the amount of signal rejection, which is again unrelated to the ratios described in the background section. Independent claim 46, as well as dependent claims 40 and 44 are believed to be allowable for similar reasons.


In view of the above, applicant believes the pending application is in condition for allowance.

Should there be any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 49581/P028US/10103789 from which the undersigned is authorized to draw.

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Respectfully submitted,

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